



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,614	04/16/2004	Valerie Guralnik	H0005848 US CIP 1 (256.21)	1321
21186	7590	12/01/2005	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH 1600 TCF TOWER 121 SOUTH EIGHT STREET MINNEAPOLIS, MN 55402			BUI, BRYAN	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,614

Applicant(s)

GURALNIK ET AL.

Examiner

Bryan Bui

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/24/05</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's papers filed on 10/20/2005 have been received and entered. Claims 1-29 are pending in the application.
2. Applicant's remark has been considered, but it is moot in view of the new ground rejections.
3. The allowability of the dependent claims that indicated in the previous office action is withdrawn deal to the new ground rejection as follows.
4. **In order to expedite the process of this application, the examiner respectfully suggested the applicant to cancel claims 1-28 in this current application, since these claims (1-28) has been examined in a co-pending application and claim 29 in co-pending application indicated withdrawn from consideration of restriction/election.**

Double Patenting

5. Claims 1-6, and 8-29 of this application conflict with claims 1-6, and 8-29 of Application No. 10/750,222. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.
6. Claims 1-6, and 8-29 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-6 and 8-29 of copending Application No.

10/750,222. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 7 recites the limitation "the known events" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation of this claim does not refer back to parent claim 1.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Qin et al (US 6,594,620).

With respect to claim 1 and 16, Qin et al teach a system and method of identifying events in a process comprising running a principal component analysis model on sensor data from the process and calculating statistics related to the model (abstract, column 2, lines 60+); determining if an event is occurring (column 5, lines 52-

60) and finding a nearest cluster of bad actors related to the event to identify the event (column 5, line 52 to column 6, line 7).

With respect to claims 2 and 17, Qin et al teach a nearest cluster of bad actors (identified by residual and unusual variance) comprises comparing the bad vectors to known clusters in a library of cluster for bad actors (column 2, lines 42-46 and column 3, lines 9-34).

With respect to claims 3 and 18, Qin et al teach identifying a sequence of cluster matches and correlating the sequence of cluster matches to known events (column 6, lines 29-41).

With respect to claims 4 and 19, Qin et al teach determining if a cluster needs to be split when new bad actors are added and splitting the cluster into two cluster using a goodness of fit algorithm (figures 13A-13B, column 9, lines 1-17).

With respect to claims 5 and 20, Qin et al teach determining if a new event category is encountered and broadening limits for the sequence of clusters (column 5, lines 30-41).

With respect to claims 6-7, Qin et al teach a cluster is limited to a predetermined number of bad actors (column 25, lines 13-28) and the known events have definitions which are generalized (column 7, lines 1-30).

With respect to claims 8 and 21, Qin et al teach the statistic comprises Q (residual error) in column 18, line 63; and T2 (unusual variance) in column 3, line 32.

With respect to claims 9 and 22, Qin et al teach using feature scoring scheme to identify top contributors of bad actors (column 2, lines 42+).

With respect to claims 10 and 23, Qin et al teach the feature scoring scheme is based on rank, value and percent of contribution to a Q-residual sensor to identify a relative importance (column 2, lines 38-44).

With respect to claims 11 and 24, Qin et al teach the top contributors are determined based on a majority percentage of the Q-residual (column 2, lines 38+).

With respect to claims 12 and 25, Qin et al teach the top contributors are determined based on only the contributors with absolute values that are drastically different from values of other contributors (column 2, lines 38+).

With respect to claims 13 and 26, Qin et al teach the scoring scheme is based on predetermined limits (column 2, lines 38-44).

With respect to claims 14 and 27, Qin et al teach the limits are computed statistically through change point detection (column 17, line 63 to column 18, line 4).

With respect to claims 15 and 28, Qin et al teach a predetermined minimum/maximum number of contributors are selected from rank, value and percent of contribution to Q-residual sensor to identify a relative importance (column 38-44 and column 17, lines 63+).

Allowable Subject Matter

11. The following is a statement of reasons for the indication of allowable subject matter:

Claim 29 is indicating allowable over the prior art of record because the prior art does not suggest or discloses the **claimed combination** as recited in the claim.

(However, this claim is still meet under double patenting rejection as set forth above).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 571-272-2271. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BB

11/29/2005

BRYAN BUI
PRIMARY EXAMINER

